MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2022/2023 (TERM ID 2210)

BBF2154 – INVESTMENT

(All sections / Groups)

11 FEBRUARY 2023
9:00 a.m – 11:00 a.m
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of 4 pages with 4 Questions.
2. Attempt **ALL** questions. The distribution of the marks for each question is given.
3. Students are allowed to use non-programmable scientific and financial calculators.
4. Please write all your answers in the Answer Booklet provided.

QUESTION 1

a) Key indicator series is one of the tools of technical analysis to estimate future market movement. Technical indicator series may be detected for bearish and bullish trends. Some investors try to track the pattern of sophisticated traders in the belief that they might provide a better investment outcome or extraordinary insight into the future. Examine **TWO (2)** ways under the "smart money rules".

(10 marks)

b) Ningxia Corporation is interested in having additional real assets in the future by committing their existing funds today. You are required to recommend the company on **FIVE (5)** categories of the real assets with examples.

(10 marks)

c) The electronic trading system is a system that automatically matches the buy orders and the sell orders at specified prices. It is also known as the alternative trading system (ATS) and acts as the broker-dealer or as an exchange. Discuss **FIVE (5)** advantages of the electronic trading system.

(5 marks)

(Total: 25 marks)

QUESTION 2

(a) Options provide a good hedging strategy for portfolio managers as it reduces the risk of adverse price movements in an asset. Assume the portfolio manager of Abundance Corporation short sells 100 shares at RM53. She also buys a 50 call option for RM5.00 to protect against the stock price going up.

(i) If the stock ends up at RM90, calculate the overall gain or loss.

(5 marks)

(ii) If the stock ends up at RM40, calculate the overall gain or loss.

(5 marks)

(iii) If she had an unprotected short sale position (no call option), what is the most she could lose?

(1 mark)

(iv) If she had a limited order to buy the stock and close out the position at RM70, calculate the net gain or loss.

(2 marks)

Continued .....

(b) Rocky has invested in a bond and the details as below:

- 16% coupon interest
- par value is RM1000
- bond is priced at RM1600 with 16 years to maturity

(i) Calculate the yield to maturity (YTM) of this bond, using semi-annual compounding.

(3 marks)

(ii) Calculate the yield to call (YTC) of this bond, using semi-annual compounding, if the call of the bond can be made in 10 years at a price of RM1200.

(3 marks)

(iii) Explain the difference between yield to maturity (YTM) and yield to call (YTC).

(6 marks)

(Total: 25 marks)

QUESTION 3

(a) A portfolio is designed according to the investor's risk tolerance, time frame and investment objectives. An investment portfolio represents a variety of asset classes and types of investments to achieve an appropriate risk-return portfolio allocation. Below is a portfolio consisting of the following stocks:

Stock	Investment Amount	Beta	Expected return
Diamond	RM40,000	1.80	25%
Sapphire	RM32,000	1.30	20%
Ruby	RM60,000	0.80	11%
Jade	RM43,000	1.05	13%

The Treasury bill rate is 3% and the expected return on the market portfolio is 6%.

(i) What is the expected return of the portfolio?

(5 marks)

(ii) Calculate the beta of the portfolio.

(5 marks)

(iii) Calculate the required rate of return.

(2 marks)

Continued .....

(b) The capital market line (CML) from the capital asset pricing model is to portray the rates of return for efficient portfolios subject to the risk level for a market portfolio. Lynn has gathered some figures that are related to CML as follows:

- risk-free rate (R_F) = 9%,
- market rate of return (K_M) = 13%,
- market standard deviation (σ_M) = 11%
- standard deviation of the portfolio (σ_P) = 13%.

(i) Using the formula for the capital market line, calculate the expected value of the portfolio (K_P).

(5 marks)

(ii) Assume the portfolio standard deviation (σ_P) has increased to 17%. Using the formula for the capital market line, calculate the expected value of the portfolio (K_P).

(5 marks)

(iii) Compare the answer in part (i) and part (ii). In terms of capital market theory, explain whether the expected value of the portfolio (K_P) is increased.

(3 marks)

(Total: 25 marks)

QUESTION 4

(a) Mind Wise Corporation anticipates a non-constant growth pattern for dividends. Dividends at the end of year 1 are RM2.00 per share and are expected to grow by 16% per year until the end of year 5. After year 5, dividends are expected to grow at 6% as far as the company can see into the future. All dividends are to be discounted back to present at a discount rate of 10%.

(i) Compute the dividend for year 2 until year 5.

(4 marks)

(ii) Solve the NPV for all dividends from year 1 until year 5.

(3 marks)

(iii) Calculate the dividend in year 6.

(2 marks)

(iv) Calculate the present value of the year 5 stock price.

(2 marks)

(v) Compute the total present value of the stock.

(2 marks)

Continued .....

(b) Einkorn Company expects that they need to buy 70,000 bushels of corn in six months to use in their products. The existing cash price for corns is RM6.50 a bushel. A six-month futures contract for corns can be bought at RM6.60.

(i) Discuss why the company might need to buy futures contracts to hedge its position.
(2 marks)

(ii) To fully hedge their exposure, how many contracts will they need to buy? Assumed corns trade in 5,000-bushel contracts.
(2 marks)

(iii) If the cash price of corn ends up at RM6.75 per bushel after six months, how much will the actual cost of 70,000 bushels of corn have increased?
(3 marks)

(iv) After the futures contracts are closed out at RM6.75, what will be the gain or loss on the futures contracts?
(3 marks)

(v) What is the overall gain or loss after considering the answer in part (iii) and part (iv)?
(2 marks)

(Total: 25 marks)

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